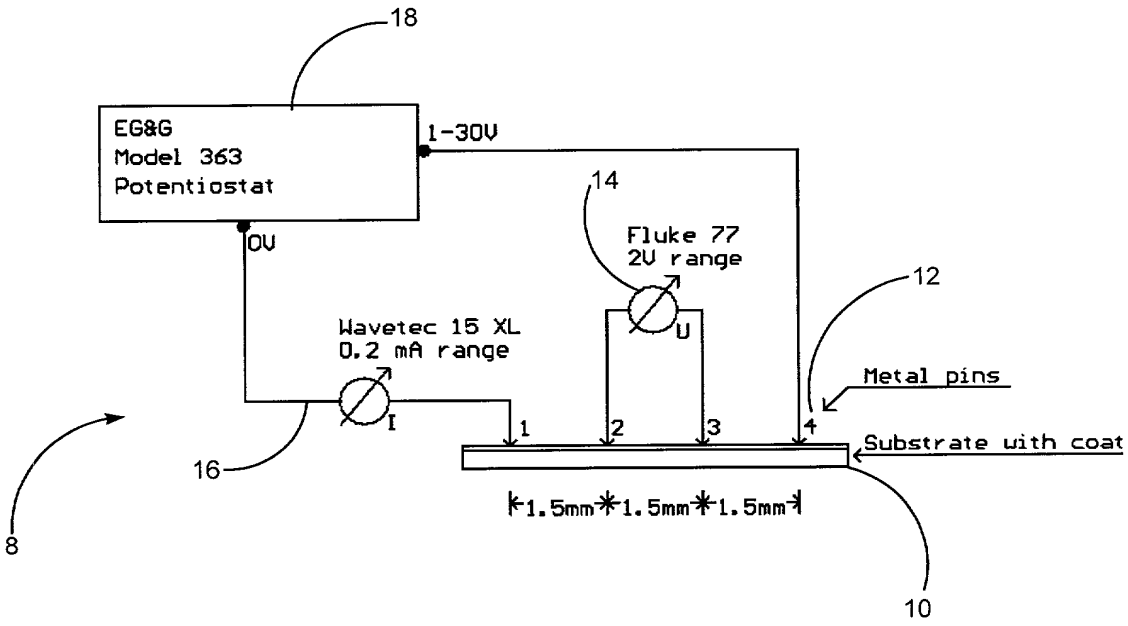


Figure 1. Apparatus to measure surface resistivity.

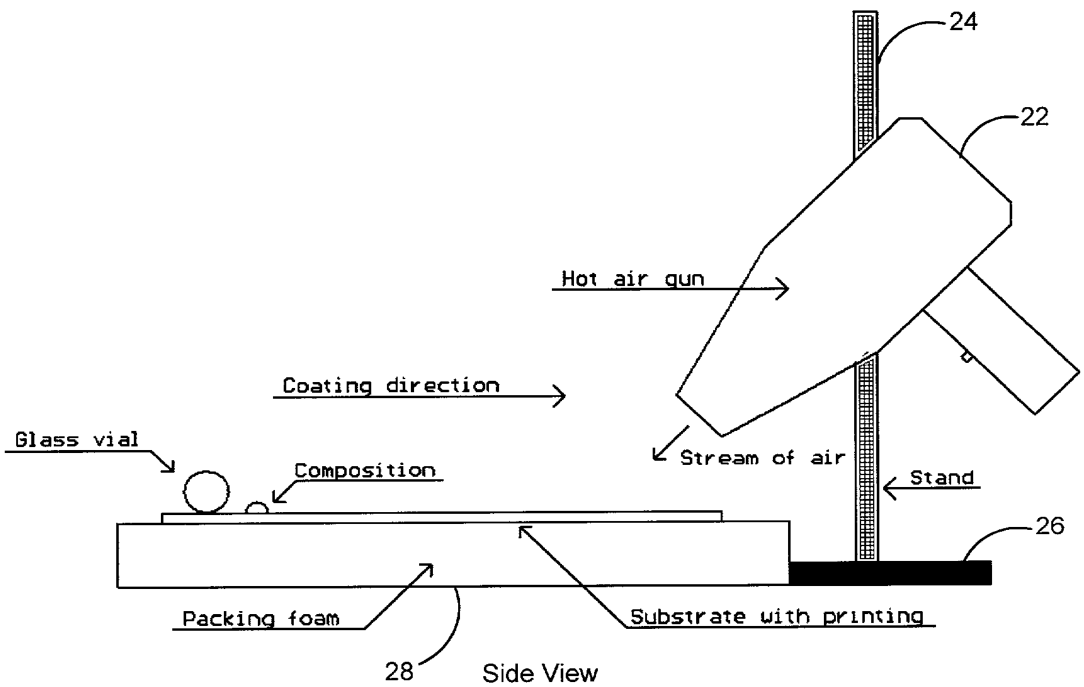

24
22
Hot air gun
Coating direction
Glass vial
Composition
Stream of air
Stand
26
Packing foam
Substrate with printing
28
Side View

Figure 2A.

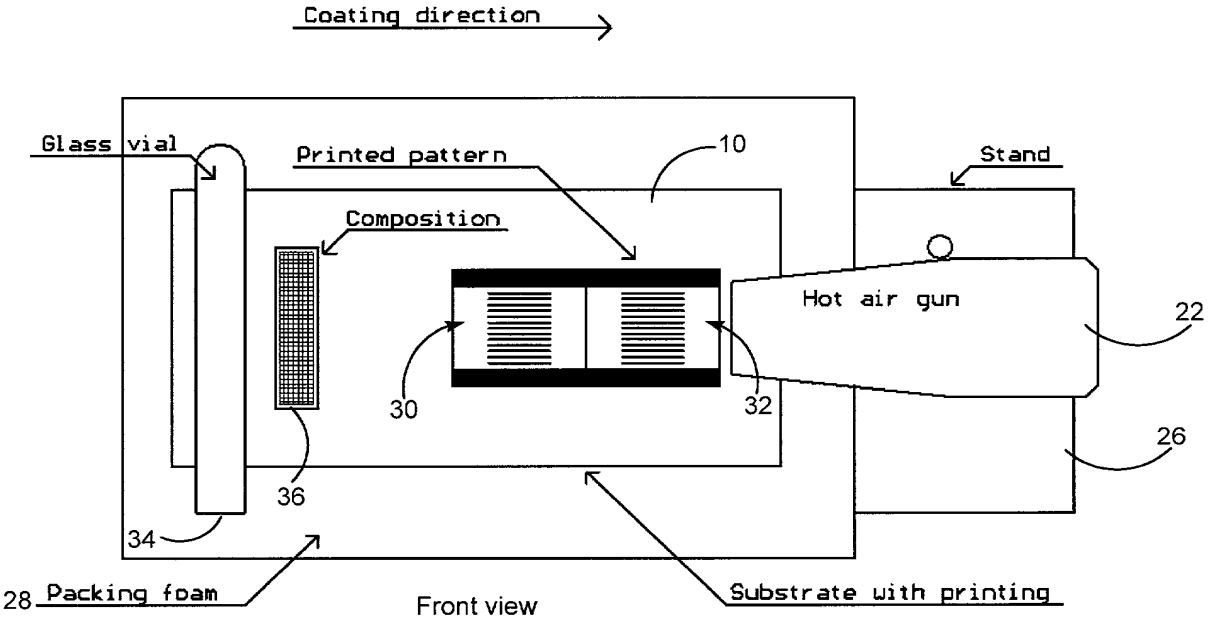


Figure 2B. Coating apparatus.

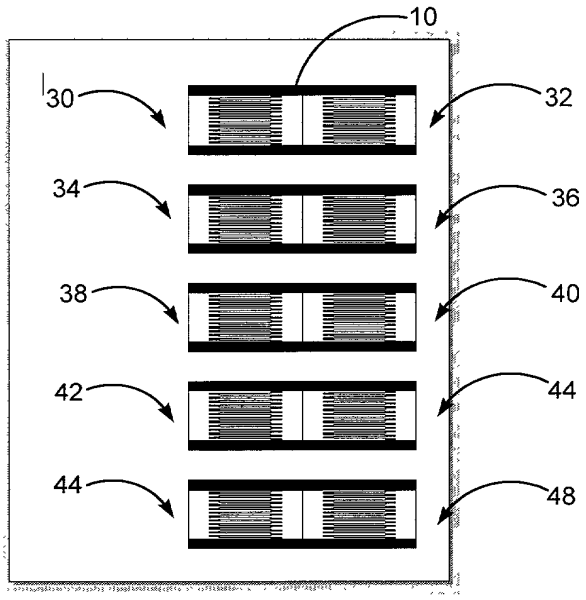


Figure 3. Printed pattern on letter size substrate.

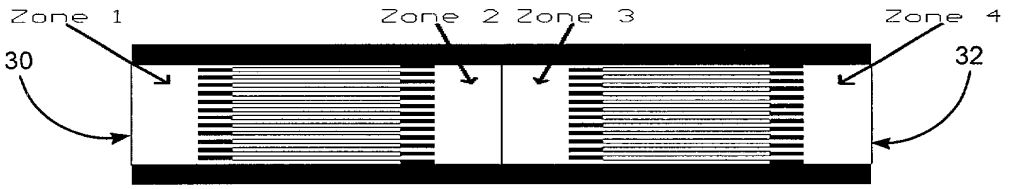


Figure 4. Areas (zones) used for measurement of surface resistivity and resistance.

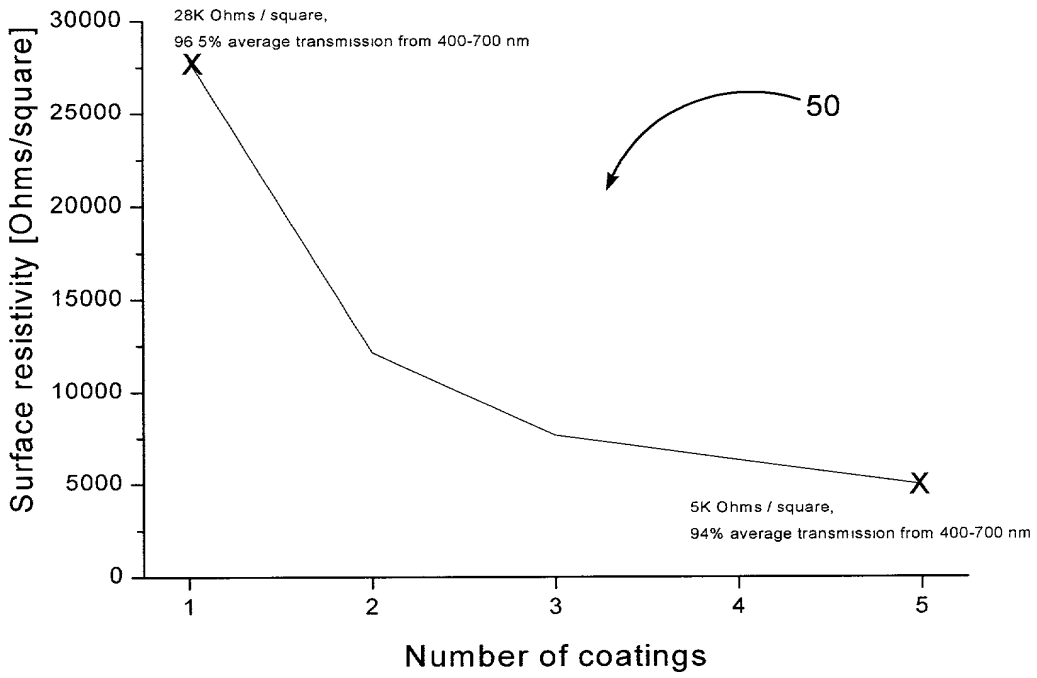


Figure 5. Surface resistivity versus number of coatings.

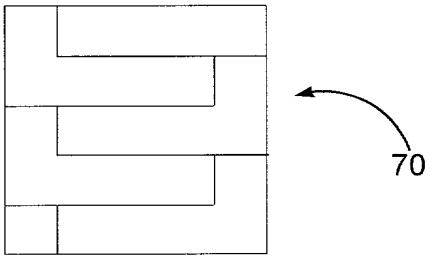


Figure 6. First layer of solar cell.

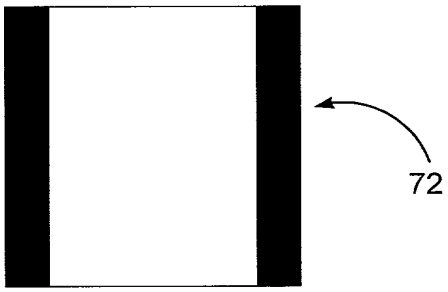


Figure 7. Second layer of the solar cell.

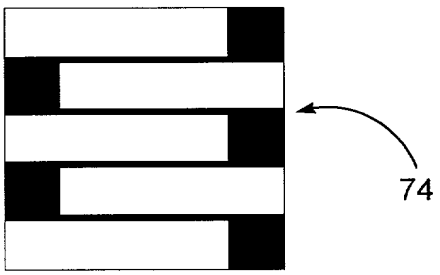


Figure 8. Third layer of the solar cell.

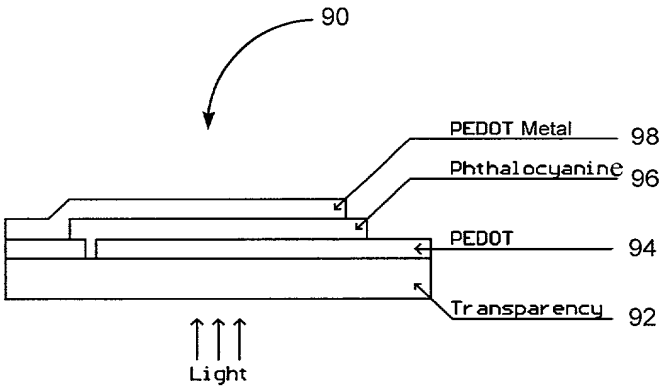
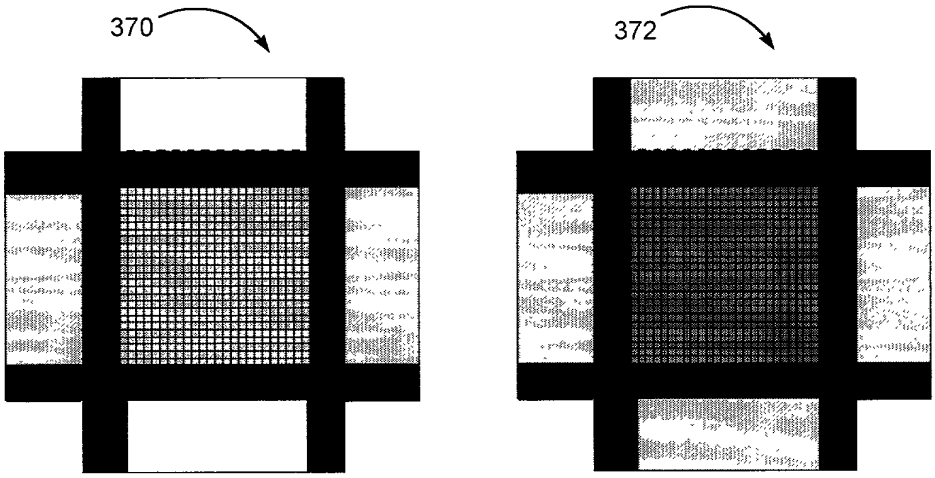


Figure 9. Layer structure of the device.



Coated pattern with orthogonal printing

Coated pattern with orthogonal printing and additional coating.

Figure 10.

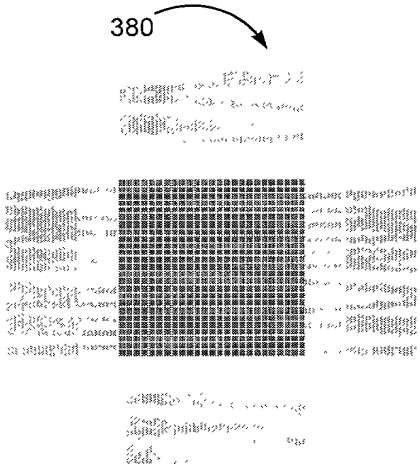


Figure 11.

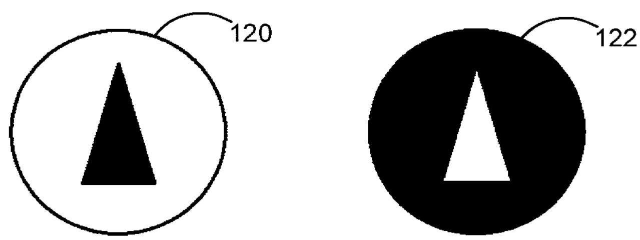


Figure 12. Front side of two wheels.

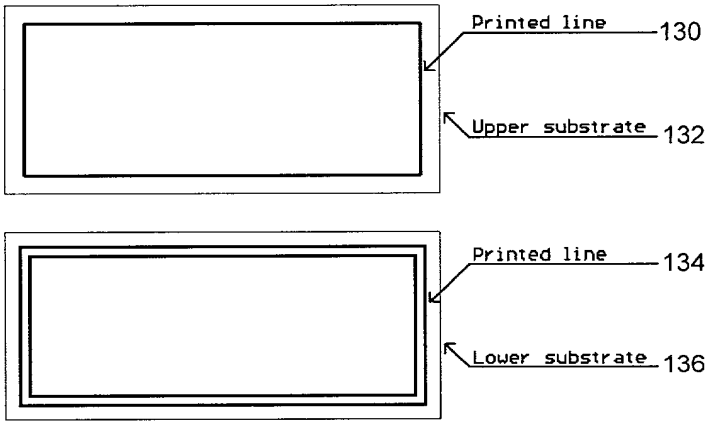


Figure 13.

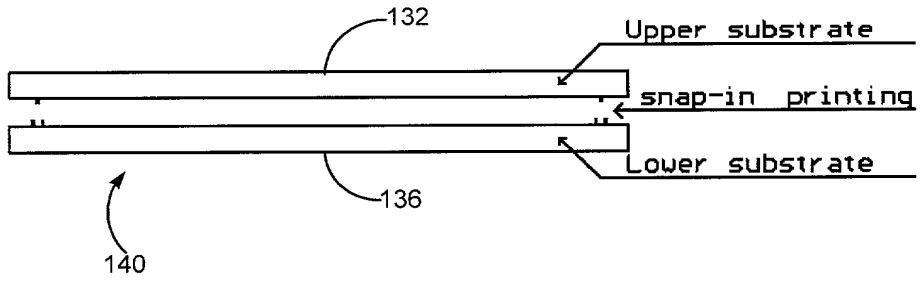


Figure 14.

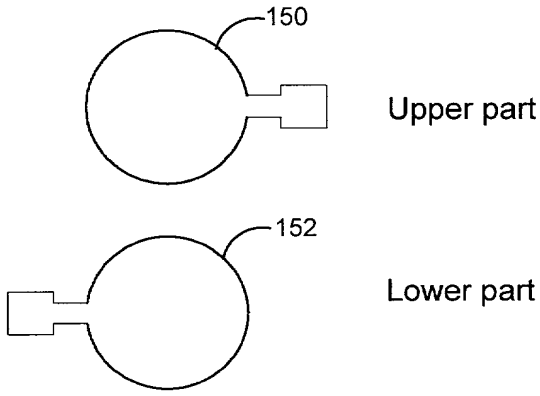


Figure 15.

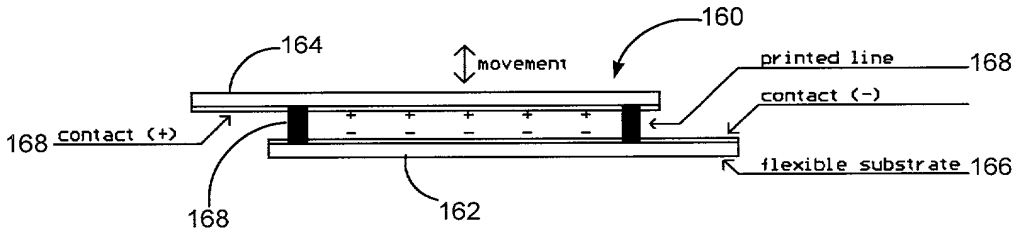


Figure 16.

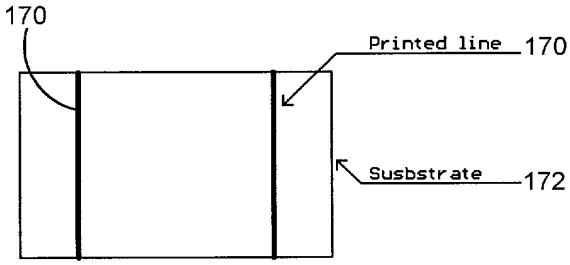


Figure 17.

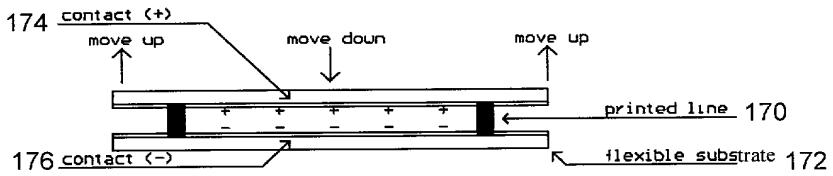

174 contact (+)
move up
move doun
move up
printed line 170
176 contact (-)
flexible substrate 172

Figure 18.

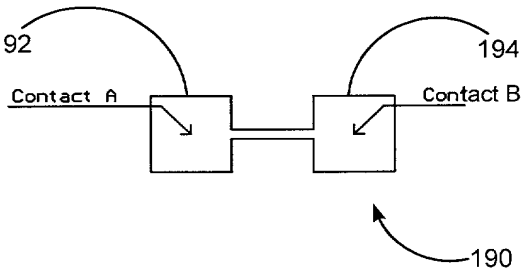


Figure 19.

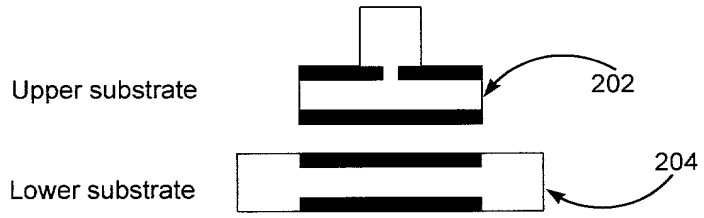


Figure 20.

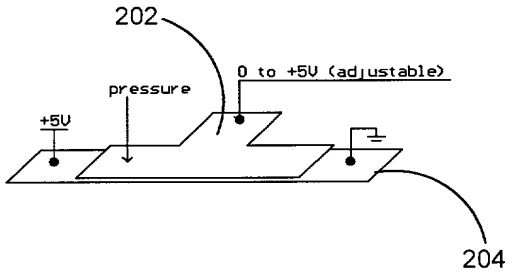
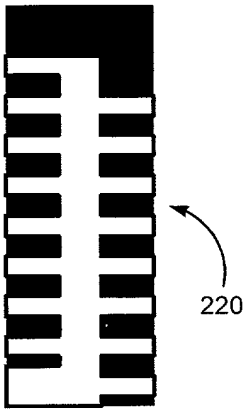
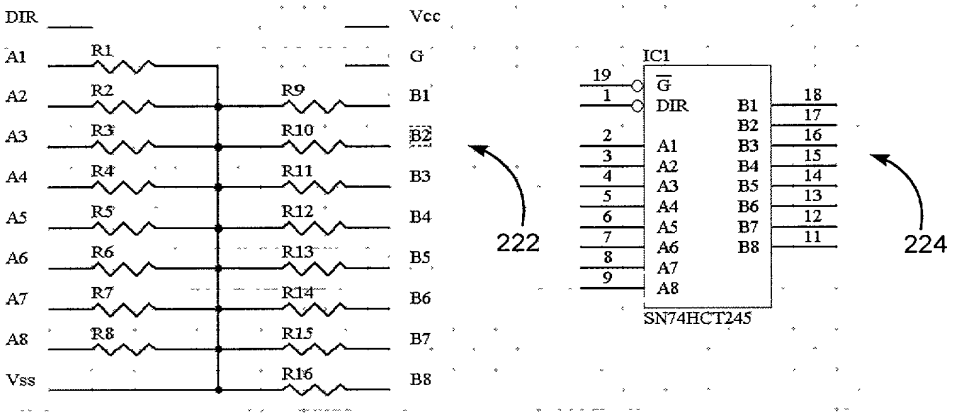


Figure 21.



Resistor pattern

Figure 22A.



Resistor schematic
PIN assignment

Figure 22B.

Figure 22C.

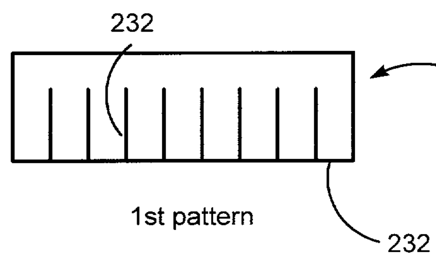


Figure 23A.

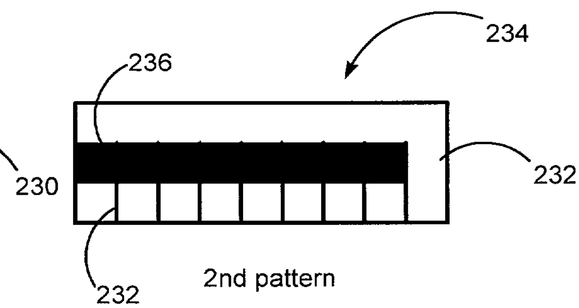


Figure 23B.

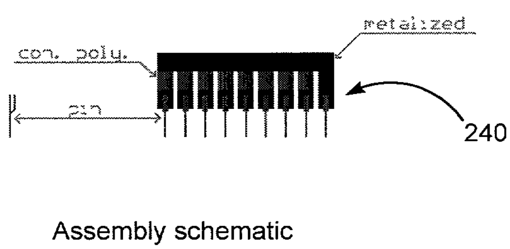


Figure 24A.

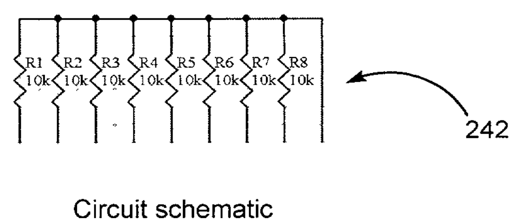


Figure 24B.

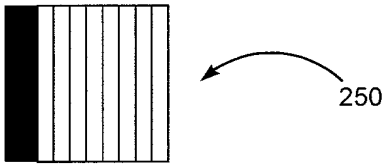


Figure 25.

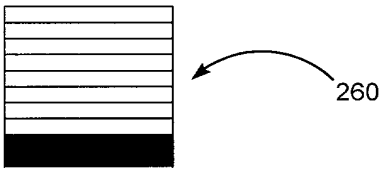
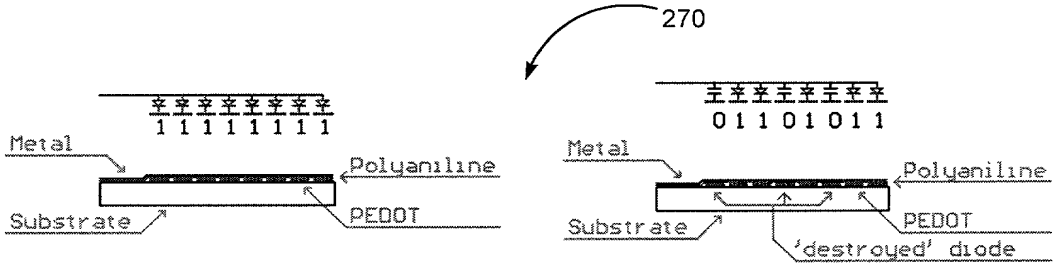


Figure 26.



Non-programmed device

Programmed device

Figure 27.

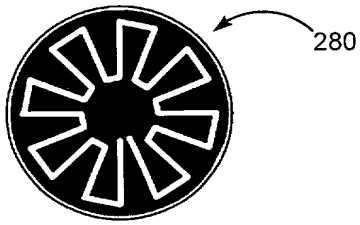


Figure 28.

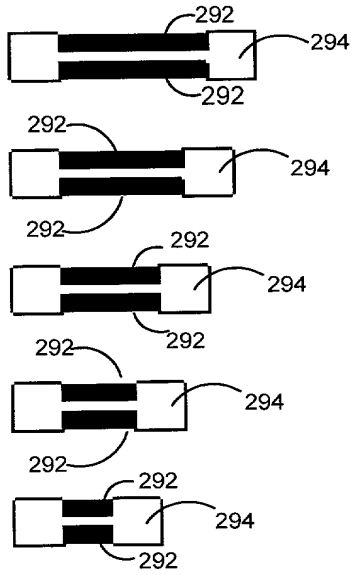


Figure 29. Pattern for resistors.

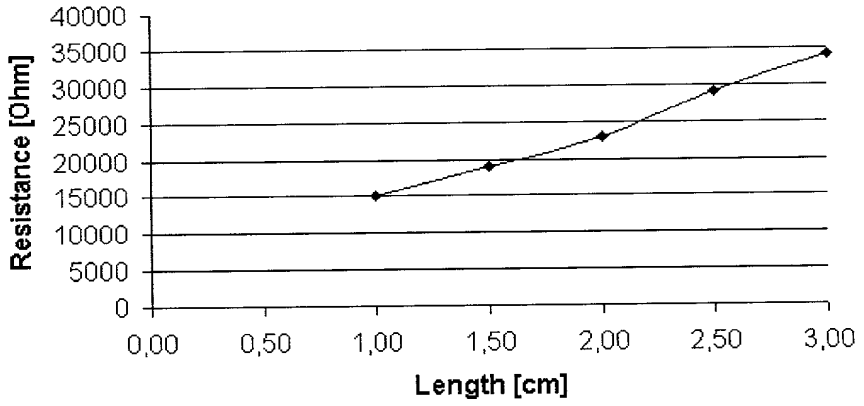


Figure 30. Dependence of the absolute resistance on the length of the resistor.

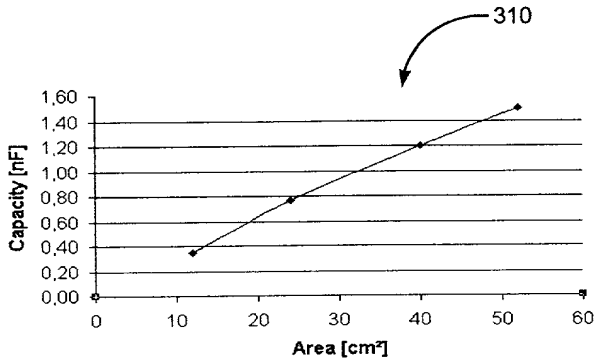


Figure 31A.

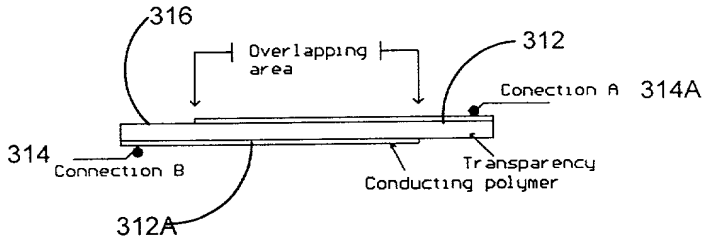


Figure 31B.

Figure 31. Dependence of the capacitance on the size of two insulated, overlapping areas of the conducting polymer PEDOT-PSS insulated from each other.

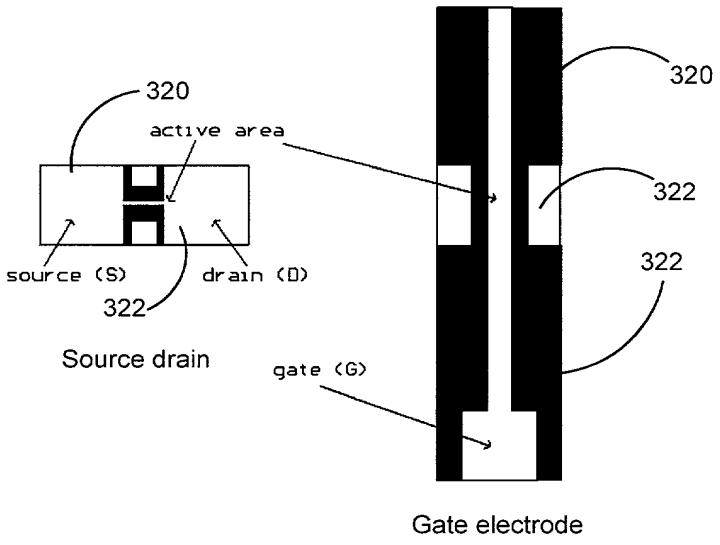


Figure 32. Negative image of a pattern used for the FET-like device.

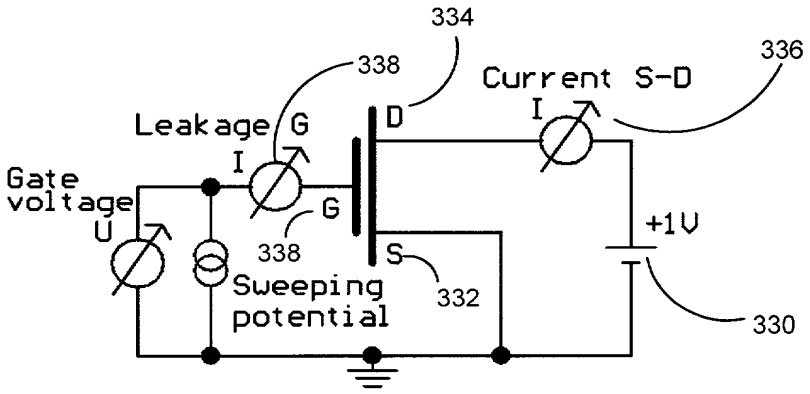


Figure 33. Schematic of the measurement assembly used to characterize the FET-like device.

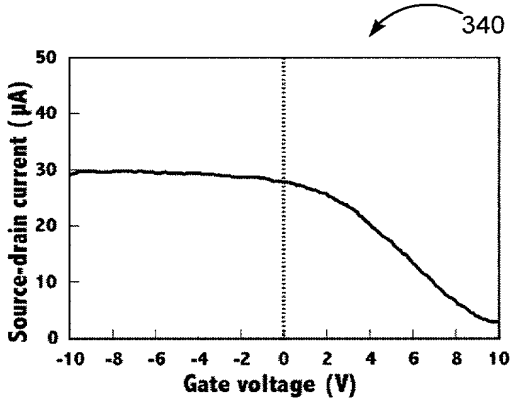
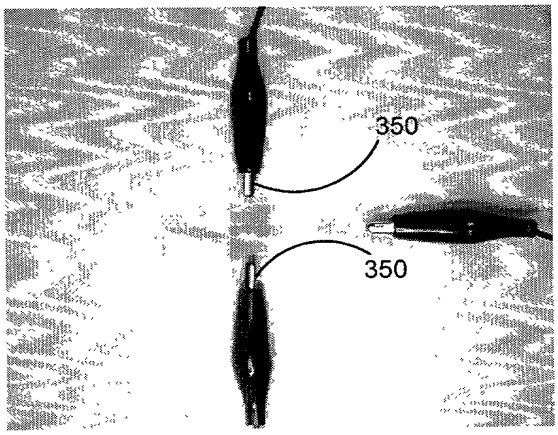


Figure 34. I/U characteristics of the FET-like device.



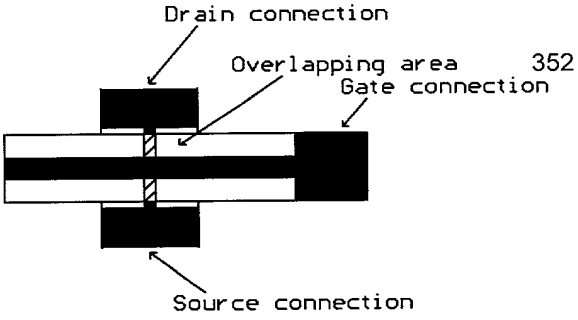
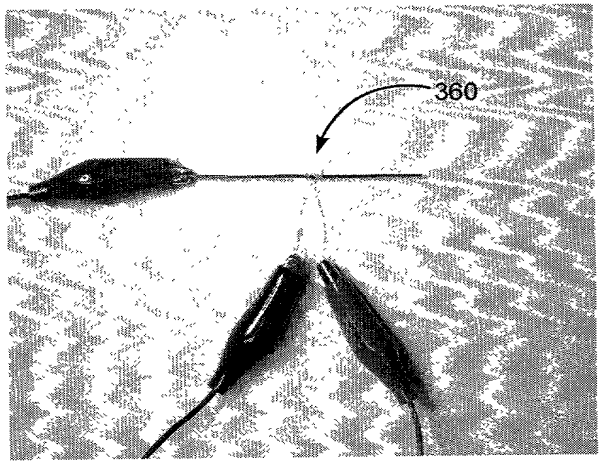


Figure 35. Operational device.



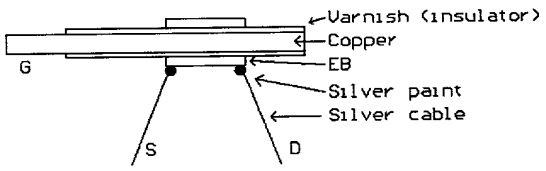


Figure 36. Operational FET-like device made from a coated copper cable, EB, silver paint and silver wires.